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CENTRAL FAX CENTER****APR 09 2007****Remarks**

Applicants respond hereby to the outstanding Office Action mailed December 7, 2006, in the above-identified application. Claims 6, and 8-10 are amended hereby, new claim 12 is presented and claims 1-5 and 7 are cancelled without prejudice or disclaimer of subject matter. Each of claims 6 and 8-12 remain pending hereinafter, where claim 6 is the independent claim.

Response To Objection/Rejection of Title of the Invention

In the outstanding Office Action, the title was objected to as not clearly indicative of the invention to which the claims are directed. In response, applicants have amended the title as shown at page 2 of this paper ("**In the Specification**"). The amended Title now reads: Optical Imaging System For Tissue Examination. Applicants, therefore, request withdrawal of the objection/rejection to applicants' title of the invention as amended.

Response To Rejection Under 35 USC §112, Second Paragraph

Claims 1-5, and 7-11 were rejected under 35 USC § 112, second paragraph, as indefinite in the December 7, 2006, Office Action. The Examiner asserts that the use of the terms light and light source in claims 1 and 7 is awkward.

In response to the second paragraph rejections, applicants have cancelled claims 1-5 and 7, amended claim 6 to include the claim 7 limitation, and amended the dependencies of claims 8-11 to depend from claim 6; new claim 12 depends from claim 6.

Claim 6, as amended, the sole independent claim, now reads: "position adjusting means for adjusting the relative positional relation between the end face of the fiber bundle close to the light source, and the light source, such that light emitted from the light source is incident on the fiber bundle." Applicants believe that the modification to claim 6, the sole dependent claim, makes clear that the adjustment is with respect to the end face of the fiber bundle and the light source, and therefore render the rejected claims compliant with the second paragraph of Section 112. Applicants, therefore, respectively request withdrawal of the rejection of claims 8-11.

Response To Rejection Under 35 USC §102

US Patent No. 7,087,014 to Sasaki

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Claims 1-11 were rejected under 35 USC § 102(b) as anticipated by US Patent No. 7,087,014 to Sasaki (Sasaki).

In particular with respect to independent claims 1, 6 and 7, the Examiner asserts that Sasaki discloses an optical imaging system with a light source (LED 27), a small diameter probe (insertable portion 12), a fiber optic bundle (fiber optic light guide 17), light detecting means (objective glass (4/59)), image generating means (TV monitor (4/61)), connecting means (video processor 15 and socket 15b) and position adjusting means (auxiliary lighting device 18 ... an operating position ... and a retracted position) for adjusting the relative positional relation between the end face of the fiber bundle close to the light source such that light is emitted from the light source incident on the fiber bundle.

Applicants respectfully disagree. One of the important features of applicants' invention as set forth in claim 6 herein is to allow observation of tissues deep inside a subject under examination. Sasaki is not constructed in a way that will allows such deep tissue examination.

More particularly, applicants' claim 6 as amended (applicants have cancelled claims 1-5 and 7, and added the claim 7 limitation to claim 6) sets forth an optical imaging system comprising a light source for emitting light, a small-diameter probe, a fiber optic bundle, arranged in the probe, for guiding light from the light source to a tissue, a needle portion, which is arranged at a distal end of the probe for puncturing and insertion into the tissue, light detecting means for detecting light received through the needle portion from the tissue, image generating means for generating an image on the basis of signals obtained by the light detecting means, connecting means for detachably connecting the probe to at least one of the light source, the light detecting means, and the image generating means and position adjusting means for adjusting the relative positional relation between the end face of the fiber bundle close to the light source such that the light emitted from the light source is incident on the fiber bundle.

Sasaki discloses an endoscope 10 with a main light source 16, a video processor 15 including an auxiliary light source 18, and a fiber optic light guide 17 with an incident end face that selectively faces one of the auxiliary light source 15 in the video processor and main light source 16. The auxiliary light source 18 supplies illuminating light to the incident end face 17a of guide 17 in the event of a failure of main light source 16 during

endoscope operation. Sasaki states that such a construction renders it possible to use one light source commonly for a number of endoscopic light guides.

Sasaki's insertion portion 12 is constructed to be inserted into an internal body cavity or an internal cavity inside a machine, but not to be inserted into punctured tissue. That is, Sasaki's insertion portion does not include a needle portion at a distal end of the probe with which the distal end of the probe is insertable into the patient's tissue or a tissue sample. Sasaki's insertion portion is not intended to puncture tissue for insertion and imaging of the tissue, as set forth in applicants' independent claim 6.

Sasaki's position adjusting means ("auxiliary lighting device 18 ... an operating position ... and a retracted position," 5/18-29) is not equivalent, either functionally or structurally, to applicants' claimed position adjusting means. Sasaki's "auxiliary lighting device 18 ... an operating position ... and a retracted position (5/18-29)," and that the cited Sasaki structure is not provided by Sasaki to adjust the relative positional relation between the end face of the fiber bundle close to the light source, and the light source, a limitation of each of applicants' independent claims.

While the Examiner asserts that Sasaki's video processor 15 and socket 15b is equivalent to applicants' connecting means, applicants' connecting means is functionally and structurally distinct as it is constructed for detachably connecting the probe to at least one of: the light source, the light detecting means and the image generating means. Hence, Sasaki does not anticipate independent claim 6 for at least these reasons. And while the Examiner at paragraph [10-13] asserts that Sasaki discloses the position adjusting means inside connecting means of claim 8, automatic control means of claim 9, converging means of claim 10 and the position adjusting means of claim 11, applicants disagree. Rejected dependent claims 8-11 (and newly presented dependent claim 12) are patentable under Section 102(b) in view of Sasaki for at least the reasons set forth with respect to the patentability of independent claim 6 in view of Sasaki. Applicants, therefore, further respectfully request withdrawal of the rejection of claims 8-11 in view of Sasaki.

US Patent No. 5,800,342 to Takeuchi

Claims 1-11 were rejected under 35 USC § 102(e) in view of US Patent No. 5,800,342 to Takeuchi. In particular with respect to independent claims 1, 6 and 7, the

Examiner asserts that Takeuchi discloses an optical imaging system with a light source (lamp 11), a small diameter probe (insertion rod 2), a fiber optic bundle (light guide 16s), light detecting means (observation window 6), image generating means (inherent display and/or eyepiece), connecting means (light source 10) and position adjusting means (light guide connector (8s) with v-shaped groove (33s) and set screws (34) for adjusting the relative positional relation between the end face of the fiber bundle close to the light source such that light is emitted from the light source incident on the fiber bundle.

Applicants respectfully disagree. Applicants' independent claim 6 as amended sets forth an optical imaging system, as described above.

Takeuchi discloses an endoscopic light guide connector including an input end of a light guide fitted in a light guide rod. The rod is for insertion into a connector socket at a connection port of a light source to locate a light pickup end face of the light guide at a light-condensing portion of a condenser lens. The Takeuchi light guide connector has an adaptor pipe detachably fitted on a fore end portion of the light guide rod, and includes a corrective lens to adjust angles of incident light on the condenser lens on the axis of a numerical aperture of the light guide. Set screws 34 are anchored to an inside portion of V-shaped groove 33L, so that the socket member 14 is anchored to an appropriate position with respect to light guide 9L. The arrangement provides that light is received at maximum acceptance angles close to a maximum acceptance angle.

Takeuchi's flexible insertion rod 2 is not arranged with a needle portion at the distal end of the probe with which the distal end is insertable, as asserted. That is, Takeuchi is not meant to examine endoscopically by being punctured into tissue, but operates endoscopically only to examine intercavity surfaces. Takeuchi, like Sasaki, is a normal endoscope, where a distal end of the endoscope is inserted into a body cavity.

Takeuchi's light source 10 is not equivalent to applicants' connecting means, nor is Takeuchi's light guide connector (8s), v-shaped groove (33s) and set screws (34), equivalent to applicants' claimed position adjusting means. That is, applicants' position adjusting means is not found in Takeuchi, nor any other element intended for adjusting the relative positional relation between the end face of the fiber bundle close to the light source, and the light source, so that light emitted from the light source is incident on the bundle.

Hence, applicants' claim 6 is not anticipated by Takeuchi under 35 USC § 102(b). Claims 8-12 depend from claim 6 and are patentable therewith. Applicants, therefore respectfully request withdrawal of the rejections of claim 6 and 8-11 in view of Takeuchi under Section 102(b).

Response Under 35 USC § 103(a)

Claims 3 and 9 were further rejected under 35 USC 103(a) as obvious in view of Takeuchi. The Examiner states that Takeuchi discloses the claimed invention but for automatically for controlling the position adjusting means, but that it would have been obvious to automate Takeuchi's position control to provide a mechanical or automatic means to replace manual activity (position control) to accomplish the same result involves only routine skill in the art, rendering claims 3 and 9 obvious. In re Venner, 120 USPQ 192.

We disagree. That is, and with all due respect, the Examiner's cited basis for the Section 103(a) rejection (pending dependent claim 9) in view of Takeuchi alone appears to be based at least in part by hindsight. Takeuchi does not teach or suggest applicants' position adjusting means included in the language of claim 6, so that combining Takeuchi with automatic control means would not realize an invention as set forth in claim 9 for at least the reasons stated above for the patentability of claim 6 in view of Takeuchi (under Section 102(b)). In their response to the 102(b) rejection of claim 6 in view of Takeuchi, applicants pointed out the shortcomings of Takeuchi alone. By those arguments, if Takeuchi cannot be said to anticipate claim 6, then Takeuchi alone cannot be properly used to maintain a 103(a) rejection of claim 9, which depends from claim 6, even in view of the Examiner's stated motivation.

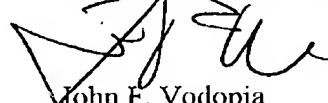
Applicants, therefore, respectfully request reconsideration and withdrawal the rejection of claim 9 in view of Takeuchi under Section 103(a).

Conclusion

It follows that each of pending claims 6 and 8-12 are patentably distinct from Sasaki under Section 102(b), from Takeuchi under Section 102(b), and from Takeuchi under Section 103(a). Applicants therefore urge the Examiner to reconsider and withdraw the rejection of

claims 6, and 8-11, to allow claims 6, 8-11 and new claim 12, and pass the application to issue. If the Examiner believes that a telephone conference with applicants' attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,



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